

1125-34-293

Keith A Landry* (klandry@georgiasouthern.edu), P.O. Box 7995, Statesboro, GA 30460, and
Brian Winkel. *Modeling in an Engineering Mathematics Class – Tuned Mass Dampers.*

The short presentation will focus on the intuitive mathematical modeling used with civil and mechanical engineering students to present two applications of systems of ordinary differential equations concerning excitation of a structure through resonance. Analysis includes investigation of the peak-frequency responses and stabilization by means of a tuned mass damper (TMD). The physics, engineering, terminology and mathematics associated with these phenomena are presented and discussed along with illustrations of how to use this material with students. (Received August 24, 2016)